WHAT IS CLAIMED:

1. An isolated nucleic acid molecule comprising a nucleotide sequence that encodes an endostatin comprising:

a) a polypeptide as shown in SEQ ID NO: 2; or

b) a polypeptide as shown in SEQ ID NO: 4.

2. An isolated nucleic acid molecule comprising:

a) a nucleic acid as shown in SEQ ID NO: 1; or

b) a nucleic acid as shown in SEQ ID NO: 3.

3. An isolated nucleic acid molecule comprising a complement of the nucleic acid molecule of any one of Claims 1-2.

4. An isolated nucleic acid molecule which hybridizes to the complement of the nucleic acid molecule of any one of Claims 1-2 under highly stringent conditions.

5. An isolated nucleic acid molecule which hybridizes to the complement of the nucleic acid molecule of any one of Claims 1-2 under moderately stringent conditions.

6. The isolated nucleic acid molecule of Claim 4, wherein said isolated nucleic acid molecule encodes an endostatin, with the proviso that said endostatin is not chicken, human or mouse endostatin.

7. The isolated nucleic acid molecule of Claim 5, wherein said isolated nucleic acid molecule encodes an endostatin, with the proviso that said endostatin is not chicken, human or mouse endostatin.

8. A vector comprising the nucleic acid of any one of Claims 1-2.

9. An expression vector comprising the nucleic acid of any one of Claims 1-2 operatively associated with a regulatory nucleic acid controlling the expression of the polypeptide encoded by said nucleic acid.

10. A host cell genetically engineered to contain the nucleic acid of any one of Claims 1-2.

11. A host cell genetically engineered to express the nucleic acid of any one of Claims 1-2 operatively associated with a regulatory nucleic acid controlling expression of the polypeptide encoded by said nucleic acid.

12. A transgenic, non-human animal which has been genetically engineered to contain a transgene comprising the nucleic acid of any one of Claims 1-2.

13. The transgenic, non-human animal of Claim 12, wherein the transgene is expressed.

14. An isolated polypeptide comprising an amino acid sequence of:

a) SEQ ID NO: 2; or

b) SEQ ID NO: 4.

15. An antibody which binds to the isolated polypeptide of Claim 14.

16. An isolated polypeptide comprising an amino acid sequence encoded by the isolated nucleic acid molecule of Claim 4.

17. An isolated polypeptide comprising an amino acid sequence encoded by the isolated nucleic acid molecule of Claim 5.

18. An isolated fusion polypeptide comprising a fusion peptide and an amino acid sequence of:

a) SEQ ID NO: 2; or

b) SEQ ID NO: 4.

19. An isolated fusion polypeptide comprising a fusion peptide and an amino acid sequence encoded by the isolated nucleic acid molecule of Claim 4.

20. An isolated fusion polypeptide comprising a fusion peptide and an amino acid sequence encoded by the isolated nucleic acid molecule of Claim 5.

21. A method for treating an angiogenesis-related disorder in a subject comprising administering to the subject a compound which modulates the function, activity and/or expression of an endostatin sequence in the subject.

22. The method of Claim 21, wherein the compound enhances or increases the function, activity and/or expression of the endostatin sequence.

23. The methods of any one of Claims 21-22, wherein the compound is selected from the group consisting of a small organic molecule, an antibody, a ribozyme or an antisense molecule.

24. The method of any one of Claims 21-22, wherein the angiogenesis-related disorder is selected from the group consisting of cancer; angiogenesis-dependent cancer, comprising solid tumors, blood born tumors such as leukemias, and tumor metastases; benign tumors, comprising hemangiomas, acoustic neuromas, neurofibromas, trachomas, and pyogenic granulomas; rheumatoid arthritis; psoriasis; ocular angiogenic diseases, comprising diabetic retinopathy, retinopathy of prematurity, macular degeneration, corneal graft rejection, neovascular glaucoma, retrolental fibroplasia, rubeosis; Osler-Webber Syndrome; myocardial angiogenesis; plaque neovascularization; telangiectasia; hemophiliac joints; angiofibroma; wound granulation; coronary collaterals; cerebral collaterals; arteriovenous malformations; ischemic limb angiogenesis; diabetic neovascularization; macular degeneration; fractures; vasculogenesis; hematopoiesis; ovulation; menstruation; and placentation.

25. The method of Claim 21, wherein the endostatin sequence encodes an amino acid sequence comprising:

a) SEQ ID NO: 2; or

b) SEQ ID NO: 4.

26. The method of Claim 21, wherein the subject is a dog.

27. A method for identifying a compound which modulates expression of an endostatin sequence comprising:

a) contacting a test compound to a cell that expresses an endostatin sequence;

b) measuring a level of endostatin sequence expression in the cell;

c) comparing the level of endostatin sequence expression in the cell in the presence of the test compound to a level of endostatin sequence expression in the cell in the absence of the test compound,

wherein if the level of endostatin sequence expression in the cell in the presence of the test compound differs from the level of expression of the endostatin sequence in the cell in the absence of the test compound, a compound that modulates expression of an endostatin sequence is identified.

28. The method of Claim 27, wherein the endostatin sequence is endogenously expressed within the cell.

29. The method of Claim 27, wherein the endostatin sequence encodes an amino acid sequence comprising:

a) SEQ ID NO: 2; or

b) SEQ ID NO: 4.

30. The method of Claim 27, wherein the endostatin sequence comprises:

a) a nucleic acid as shown in SEQ ID NO: 1; or

b) a nucleic acid as shown in SEQ ID NO: 3.

31. A method for identifying a compound which modulates activity of an endostatin sequence product comprising:

a) contacting a test compound to a cell that expresses an endostatin sequence product;

b) measuring a level of endostatin sequence product in the cell;

c) comparing the level of endostatin sequence product activity in the cell in the presence of the test compound to a level of endostatin sequence product activity in the cell in the absence of the test compound,

wherein if the level of endostatin sequence product activity in the cell in the presence of the test compound differs from the level of endostatin sequence product activity in the cell in the absence of the test compound, a compound that modulates activity of an endostatin sequence product is identified.

32. The method of Claim 31, wherein the endostatin sequence product comprises:

a) SEQ ID NO: 2; or

b) SEQ ID NO: 4.

33. A method for modulating the activity and/or expression of an endostatin sequence in a cell comprising administering to the cell a compound which modulates the activity and/or expression of an endostatin sequence in the cell.

34. The method of Claim 33, wherein the compound is selected from the group consisting of a small organic molecule, an antibody, a ribozyme or an antisense molecule.

35. The method of Claim 33, wherein the endostatin sequence encodes an amino acid sequence comprising:

a) SEQ ID NO: 2; or

b) SEQ ID NO: 4.

36. The method of Claim 33, wherein the endostatin sequence comprises:

a) a nucleic acid as shown in SEQ ID NO: 1; or

b) a nucleic acid as shown in SEQ ID NO: 3.